

## CLAIMS

What is claimed is:

- 1 <sup>sub</sup> 1. A method comprising:  
2 <sup>A1</sup> dividing a set of target devices to which a message is targeted into a number of  
3 subsets of target devices, wherein the subset to which a particular device belongs is  
4 determined based on an identifier of the device and the number of subsets of target  
5 devices; and  
6 varying the timing with which the message is communicated to the respective  
7 subsets of target devices.
- 1 2. The method of claim 1 wherein determining a set of target devices to  
2 which the message is targeted comprises:  
3 broadcasting the message over a network;  
4 receiving one or more responses to the message from target devices coupled to the  
5 network;  
6 estimating a number of devices coupled to the network; and  
7 determining a number of subgroups based, at least in part, on the estimated  
8 number of devices coupled to the network.
- 1 3. The method of claim 1 wherein determining a set of target devices to  
2 which the message is targeted comprises:  
3 multicasting the message to a subnet of a network;  
4 receiving one or more responses to the message from target devices of the subnet;

5 estimating a number of devices in the subnet; and  
6 determining a number of subgroups based, at least in part, on the estimated  
7 number of devices in the subnet.

1 4. An article comprising a machine-accessible medium to provide machine-  
2 readable instructions that, when executed, cause one or more electronic systems to:  
3 divide a set of target devices to which a message is targeted into a number of  
4 subsets of target devices, wherein the subset to which a particular device belongs is  
5 determined based on an identifier of the device and the number of subsets of target  
6 devices; and  
7 vary the timing with which the message is communicated to the respective subsets  
8 of target devices.

1 5. The article of claim 4 wherein the sequences of instructions that cause the  
2 one or more electronic systems to determine a set of target devices to which the message  
3 is targeted further comprises sequences of instructions that, when executed, cause the one  
4 or more electronic systems to:  
5 broadcast the message over a network;  
6 receive one or more responses to the message from target devices coupled to the  
7 network;  
8 estimate a number of devices coupled to the network; and  
9 determine a number of subgroups based, at least in part, on the estimated number  
10 of devices coupled to the network.

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1           6.       The article of claim 4 wherein the sequences of instructions that cause the  
2 one or more electronic systems to determine a set of target devices to which the message  
3 is targeted further comprises sequences of instructions that, when executed, cause the one  
4 or more electronic systems to:

5           multicast the message to a subnet of a network;

6           receive one or more responses to the message from target devices of the subnet;

7           estimate a number of devices in the subnet; and

8           determine a number of subgroups based, at least in part, on the estimated number  
9 of devices in the subnet.

1           7.       An electronic data signal embodied in a data communications medium  
2 shared among a plurality of network devices comprising sequences of instructions that,  
3 when executed, cause one or more electronic systems to:   divide a set of target devices  
4 to which a message is targeted into a number of subsets of target devices, wherein the  
5 subset to which a particular device belongs is determined based on an identifier of the  
6 device and the number of subsets of target devices; and

7           vary the timing with which the message is communicated to the respective subsets  
8 of target devices.

1           8.       The electronic data signal of claim 7 wherein the sequences of instructions  
2 that cause the one or more electronic systems to determine a set of target devices to

3 which the message is targeted further comprises sequences of instructions that, when  
4 executed, cause the one or more electronic systems to:  
5 broadcast the message over a network;  
6 receive one or more responses to the message from target devices coupled to the  
7 network;  
8 estimate a number of devices coupled to the network; and  
9 determine a number of subgroups based, at least in part, on the estimated number  
10 of devices coupled to the network.

1 9. The electronic data signal of claim 7 wherein the sequences of instructions  
2 that cause the one or more electronic systems to determine a set of target devices to  
3 which the message is targeted further comprises sequences of instructions that, when  
4 executed, cause the one or more electronic systems to:  
5 multicast the message to a subnet of a network;  
6 receive one or more responses to the message from target devices of the subnet;  
7 estimate a number of devices in the subnet; and  
8 determine a number of subgroups based, at least in part, on the estimated number  
9 of devices in the subnet.

1 10. A method comprising:  
2 dividing a set of target devices to which a message is targeted into multiple  
3 subsets of target devices, wherein the subset to which a particular device belongs is  
4 determined based on an identifier of the device; and

5 varying the timing with which the respective subsets of target devices respond to  
6 the message.

1 11. The method of claim 10 wherein determining a set of target devices to  
2 which the message is targeted comprises:  
3 broadcasting the message over a network;  
4 receiving one or more responses to the message from target devices coupled to the  
5 network;  
6 estimating a number of devices coupled to the network; and  
7 determining a number of subgroups based, at least in part, on the estimated  
8 number of devices coupled to the network.

1 12. The method of claim 10 wherein determining a set of target devices to  
2 which the message is targeted comprises:  
3 multicasting the message to a subnet of a network;  
4 receiving one or more responses to the message from target devices of the subnet;  
5 estimating a number of devices in the subnet; and  
6 determining a number of subgroups based, at least in part, on the estimated  
7 number of devices in the subnet.

1 13. An article comprising a machine-accessible medium to provide machine-  
2 readable instructions that, when executed, cause one or more electronic systems to:

3 divide a set of target devices to which a message is targeted into multiple subsets  
4 of target devices, wherein the subset to which a particular device belongs is determined  
5 based on an identifier of the device; and  
6 vary the timing with which the respective subsets of target devices respond to the  
7 message.

1 14. The article of claim 13 wherein the sequences of instructions that cause  
2 the one or more electronic systems to determine a set of target devices to which the  
3 message is targeted comprises sequences of instructions that, when executed, cause the  
4 one or more electronic systems to:

5 broadcast the message over a network;  
6 receive one or more responses to the message from target devices coupled to the  
7 network;  
8 estimate a number of devices coupled to the network; and  
9 determine a number of subgroups based, at least in part, on the estimated number  
10 of devices coupled to the network.

1 15. The article of claim 13 wherein the sequences of instructions that cause  
2 the one or more electronic systems to determine a set of target devices to which the  
3 message is targeted comprises sequences of instructions that, when executed, cause the  
4 one or more electronic systems to:

5 multicast the message to a subnet of a network;  
6 receive one or more responses to the message from target devices of the subnet;

7 estimate a number of devices in the subnet; and  
8 determine a number of subgroups based, at least in part, on the estimated number  
9 of devices in the subnet.

1 16. An electronic data signal embodied in a data communications medium  
2 shared among a plurality of network devices comprising sequences of instructions that,  
3 when executed, cause one or more electronic systems to:  
4 divide a set of target devices to which a message is targeted into multiple subsets  
5 of target devices, wherein the subset to which a particular device belongs is determined  
6 based on an identifier of the device; and  
7 vary the timing with which the respective subsets of target devices respond to the  
8 message.

1 17. The electronic data signal of claim 16 wherein the sequences of  
2 instructions that cause the one or more electronic systems to determine a set of target  
3 devices to which the message is targeted comprises sequences of instructions that, when  
4 executed, cause the one or more electronic systems to:  
5 broadcast the message over a network;  
6 receive one or more responses to the message from target devices coupled to the  
7 network;  
8 estimate a number of devices coupled to the network; and  
9 determine a number of subgroups based, at least in part, on the estimated number  
10 of devices coupled to the network.

1 18. The electronic data signal of claim 16 wherein the sequences of  
2 instructions that cause the one or more electronic systems to determine a set of target  
3 devices to which the message is targeted comprises sequences of instructions that, when  
4 executed, cause the one or more electronic systems to:

5 multicast the message to a subnet of a network;  
6 receive one or more responses to the message from target devices of the subnet;  
7 estimate a number of devices in the subnet; and  
8 determine a number of subgroups based, at least in part, on the estimated number  
9 of devices in the subnet.

1 19. A method comprising:  
2 receiving a message via a network, the network coupled to a group of devices, the  
3 message having a bins value indicating a number of subgroups to divide the network  
4 devices into and a hash value indicating a specific subgroup of the number of subgroups  
5 to which the message is targeted;

6 performing a hashing function with a unique identifier and the bins value to  
7 generate a hash result; and  
8 responding to the message if the hash result equals the hash value.

1 20. The method of claim 19 wherein the message is a discovery request  
2 message.



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1           21.     An article comprising a machine-accessible medium to provide machine-  
2 readable instructions that, when executed, cause one or more electronic systems to:  
3           receive a message via a network, the network coupled to a group of devices, the  
4 message having a bins value indicating a number of subgroups to divide the network  
5 devices into and a hash value indicating a specific subgroup of the number of subgroups  
6 to which the message is targeted;  
7           perform a hashing function with a unique identifier and the bins value to generate  
8 a hash result; and  
9           respond to the message if the hash result equals the hash value.

1           22.     The article of claim 21 wherein the message is a discovery request  
2 message.

1           23.     An electronic data signal embodied in a data communications medium  
2 shared among a plurality of network devices comprising sequences of instructions that,  
3 when executed, cause one or more electronic systems to:  
4           receive a message via a network, the network coupled to a group of devices, the  
5 message having a bins value indicating a number of subgroups to divide the network  
6 devices into and a hash value indicating a specific subgroup of the number of subgroups  
7 to which the message is targeted;  
8           perform a hashing function with a unique identifier and the bins value to generate  
9 a hash result; and  
10          respond to the message if the hash result equals the hash value.

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- 1 24. The electronic data signal of claim 23 wherein the message is a discovery
- 2 request message.

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